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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,609	11/09/2001	Mitsunobu Yoshida	2342-0130P	3890

2292 7590 11/29/2002

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EXAMINER

AGUIRRECHEA, JAYDI A

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/913,609

Applicant(s)

YOSHIDA ET AL.

Examiner

Jaydi A. Aguirrechea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) Z. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1-13 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bishop (US 6182340).

Bishop discloses a piezoelectric transformer, characterized in that at least two piezoelectric substrates (30, 48) are connected via at least two connectors (56, 58, 60) each of said at least two piezoelectric substrates being formed of a piezoelectric material (Column 3, lines 31-35), having a plane plate shape (Figure 2, 3), and

an input section (V_1) is provided at said one of the piezoelectric substrates, and an output (V_2) section is provided at said other of the piezoelectric substrates.

4. With regards to claim 2, Bishop discloses the piezoelectric substrate having a rectangular parallelepiped shape.

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5. With regards to claim 3, Bishop discloses the electrodes being provided on the main faces, and the piezoelectric being polarized.
6. With regards to claims 4 and 5, Bishop discloses the claimed structure (See Figures 1 and 2).
7. With regards to claim 6, Bishop discloses the claimed invention including the two electrode groups and the electrode layers being electrically connected to each other.
8. With regards to claim 7, Bishop discloses the claimed invention where the piezoelectric layers are polarized in the longitudinal direction (See Figure 2).
9. With regards to claim 8, Bishop discloses the claimed invention having an electrical connection portion to be connected to and external circuit. (Column 2, Lines 25-30)
10. With regards to claim 9, Bishop discloses the claimed invention where the connectors have a ring shape (Figures 4, 5 and 6).
11. With regards to claims 10, 11 and 12, Bishop discloses the claimed invention having similar structure. (See figures 4, 5 and 6).
12. With regards to claim 13, Bishop discloses the claimed invention where the electrodes are electrically connected.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop (US 6182340).

Bishop discloses a piezoelectric transformer where the piezoelectric substrates have plane plate shape and another embodiment where the piezoelectric substrates have disk shape.

However, it fails to disclose an embodiment combining both shapes.

It would have been an obvious matter of design choice to combine both shapes, since the applicant has not disclosed that the combination of disk shapes and plane plate shapes solves any problem or is for a particular reason. It appears that the claimed invention would perform equally well with the disk shape, plane plate shape or the combination of them.

15. With regards to claim 20, Bishop discloses the claimed invention but fails to disclose a third piezoelectric substrate.

It would have been obvious to one skilled in the art at the time the invention was made to use a third piezoelectric substrate, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 703-305-2277. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JAA

November 26, 2002


DIRECTOR HANDEK
SUB-TOOTH BRUSH EXAMINER
TECHNICAL CENTER 2834